

SYSTEMS AND METHODS FOR SEVERING ELONGATED MATERIAL

ABSTRACT OF THE DISCLOSURE

Systems and methods for severing elongated material include a rotatable first roll having a first severing structure, a rotatable second roll having a second severing structure corresponding with the first severing structure for severing a length of the filament positioned between the rolls, a drive system operable to independently rotate the first roll and the second roll according to a drive command, a sensor system operable to make measurements and generate actual position signals representative of an actual current rotational position of the first roll and an actual current rotational position of the second roll, and a control system for receiving the position signals and operable to generate the drive command in accordance with predetermined control parameters and based on the actual rotational position signals, wherein the drive command synchronizes the respective rotational positioning of the first roll and the second roll.